Author Index to Volume 176

Adams, G.B., O.F. Sankey, J.B. Page and M. O'Keeffe, Jahn–Teller distortions in solid C_{20} and other fullerene structures 176 (1993) 61
Albrecht, A.C., see T. Joo 176 (1993) 233

Bakac, A., see K.M. Christensen 176 (1993) 359
Baldovin, A., G. De Alti, P. Decleva, G. Fronzoni and A. Lisini, Ab initio calculations of the core ionization spectra of unsaturated hydrocarbons 176 (1993) 67
Barbara, P.F., see A.E. Johnson 176 (1993) 555
Baron, M.-H., see F. Fillaux 176 (1993) 249
Bauman, D. and H.-G. Kuball, UV–visible linear dichroism of naphthalene bicarboxylic acid derivatives dissolved in nematic liquid crystal 176 (1993) 221
Belchior, J.C., J.N. Murrell and S.D. Bosanac, A hard shape potential model for atom–symmetric top inelastic cross sections 176 (1993) 155
Belinskii, M., Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. I. Exchange states, *g*-factors, hyperfine interactions 176 (1993) 15
Belinskii, M., Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. II. Double exchange in distorted cluster 176 (1993) 37
Beratan, D.N., see S.S. Skourtis 176 (1993) 501
Bixon, M. and J. Jortner, Solvent relaxation dynamics and electron transfer 176 (1993) 467
Block, R., see L. Jansen 176 (1993) 1
Böhm, M.C., J. Schulte and S. Philipp, Analysis of static and dynamic electron and spin properties within the interaction space of the one-dimensional Hubbard chain; a path-integral quantum Monte Carlo approach 176 (1993) 109
Bosanac, S.D., see J.C. Belchior 176 (1993) 155
Braga, M., see S. Larsson 176 (1993) 367
Buranda, T., see J.F. Endicott 176 (1993) 427

Chandran, L., see L. Jansen 176 (1993) 1
Chang, C.K., see J.M. Zaleski 176 (1993) 483
Christensen, K.M., A. Bakac and J.H. Espenson, Quenching of the excited state of hydrated europium(III) ions by electron transfer 176 (1993) 359
Coddens, G., see G.J. Kearley 176 (1993) 279
Cordeiro, M.N.D.S., A. Ignaczak and J.A.N.F. Gomes, Simulation of water solutions of Ni^{2+} at infinite dilution 176 (1993) 97
Cowdery-Corvan, J.R., D.G. Whitten and G.L. McLendon, Electron transfer reactions at CdS semiconductor cluster interfaces. Adsorption and microenvironment effects on oxidative reactions 176 (1993) 377
Cukier, R.I., see J.M. Zaleski 176 (1993) 483
Curtiss, L.A., C.A. Naleway and J.A. Miller, Superexchange pathway calculation of long-distance electron coupling in $H_2C(CH_2)_{m-2}CH_2$ chains 176 (1993) 387

De Alti, G., see A. Baldovin 176 (1993) 67
Decleva, P., see A. Baldovin 176 (1993) 67
DeGraziano, J.M., see S.-J. Lee 176 (1993) 321
De Meutter, S., see G. Verbeek 176 (1993) 195
Depaemelaere, S., see G. Verbeek 176 (1993) 195
De Schryver, F.C., see G. Verbeek 176 (1993) 195
Donskoi, D.V., N.N. Zaitsev and I.S. Osad'ko, Effect of tunneling systems on impurity homogeneous optical bands in amorphous solids 176 (1993) 135

Effenberger, F., see N. Holl 176 (1993) 215
Endicott, J.F., X. Song, M.A. Watzky, T. Buranda and Y. Lei, Electrochemical and spectroscopic manifestations of donor–acceptor coupling in cyanide bridged transition metal complexes: Contrasts between Ru–CN–Ru, Co–Ru and Rh–CN–Ru systems 176 (1993) 427
Espenson, J.H., see K.M. Christensen 176 (1993) 359
Eyler, J.R., see D.E. Richardson 176 (1993) 457

Farid, S., see I.R. Gould 176 (1993) 439
Favero, L.B., S. Melandri and P.G. Favero, Microwave spectrum of ^{35}ClCN in excited vibrational states 176 (1993) 165
Favero, P.G., see L.B. Favero 176 (1993) 165
Fillaux, F., J.P. Fontaine, M.-H. Baron, G.J. Kearley and J. Tomkinson, Inelastic neutron-scattering study of the proton dynamics in N-methylacetamide at 20 K 176 (1993) 249
Fillaux, F., see G.J. Kearley 176 (1993) 279
Fleming, G.R., see Z. Wang 176 (1993) 421
Fontaine, J.P., see F. Fillaux 176 (1993) 249
Fronzoni, G., see A. Baldovin 176 (1993) 67
Fukuzumi, S., T. Kitano, M. Ishikawa and Y. Matsuda, Electron transfer chemistry of hydride and carbanion donors. Hydride and carbanion transfer via electron transfer 176 (1993) 337

Georgiev, M. and J. Singh, Symmetry states of vibronic Frenkel excitons 176 (1993) 47
Gomes, J.A.N.F., see M.N.D.S. Cordeiro 176 (1993) 97
Gomez-Jahn, L., see I.R. Gould 176 (1993) 439
Goodman, J.L., see I.R. Gould 176 (1993) 439
Gould, I.R., D. Noukakis, L. Gomez-Jahn, R.H. Young, J.L. Goodman and S. Farid, Radiative and nonradiative electron transfer in contact radical–ion pairs 176 (1993) 439
Grätzel, M., see J.E. Moser 176 (1993) 493
Gust, D., see S.-J. Lee 176 (1993) 321

Holl, N., H. Port, H.C. Wolf, H. Strobel and F. Effenberger, The mechanism of intramolecular energy transfer in terminally substituted polyene molecules 176 (1993) 215
Holleman, I., see S. te Lintel Hekkert 176 (1993) 171
Holten, D., see L. Laporte 176 (1993) 615
Hush, N.S., see J.R. Reimers 176 (1993) 407
Hynes, J.T., see B.B. Smith 176 (1993) 521

Ignaczak, A., see M.N.D.S. Cordeiro 176 (1993) 97
Ishikawa, M., see S. Fukuzumi 176 (1993) 337

Isied, S.S., see M.Y. Ogawa 176 (1993) 589

Jansen, L., L. Chandran and R. Block, Exchange mediated pairing as a source of superconductivity in alkali-doped C_{60} 176 (1993) 1
Jarzęba, W., see A.E. Johnson 176 (1993) 555
Jia, Y., see Z. Wang 176 (1993) 421
Johnson, A.E., N.E. Levinger, W. Jarzęba, R.E. Schlief, D.A.V. Kliner and P.F. Barbara, Experimental and theoretical study of inhomogeneous electron transfer in betaine: comparisons of measured and predicted spectral dynamics 176 (1993) 555
Joo, T. and A.C. Albrecht, Electronic dephasing studies of molecules in solution at room temperature by femtosecond degenerate four wave mixing 176 (1993) 233
Jordan, K.D., see M.J. Shephard 176 (1993) 289
Jortner, J., see M. Bixon 176 (1993) 467

Kearley, G.J., see F. Fillaux 176 (1993) 249
Kearley, G.J., G. Coddens, F. Fillaux, J. Tomkinson and W. Wegener, The effects of NH_3 free rotation on the inelastic neutron scattering spectrum of $Ni(NH_3)_2Ni(CN)_4 \cdot 2C_6D_6$ at 20 K 176 (1993) 279
Kerrigan, P.K., see S.-J. Lee 176 (1993) 321
Kirmaier, C., see L. Laporte 176 (1993) 615
Kitano, T., see S. Fukuzumi 176 (1993) 337
Kliner, D.A.V., see A.E. Johnson 176 (1993) 555
Kuball, H.-G., see D. Bauman 176 (1993) 221
Kuznetsov, A.M., M.D. Vigdorovich and J. Ulstrup, Self-consistent environmental fluctuation effects on the electronic tunnel factor and the activation Gibbs energy in long-range electron transfer 176 (1993) 539

Ladanyi, B.M., see D.K. Phelps 176 (1993) 575
Laporte, L., L.M. McDowell, C. Kirmaier, C.C. Schenck and D. Holten, Insights into the factors controlling the rates of the deactivation processes that compete with charge separation in photosynthetic reaction centers 176 (1993) 615
Larsson, S. and M. Braga, Transfer of mobile electrons in organic molecules 176 (1993) 367
Lee, S.-J., J.M. DeGraziano, A.N. Macpherson, E.-J. Shin, P.K. Kerrigan, G.R. Seely, A.L. Moore, T.A. Moore and D. Gust, Photoinduced charge separation in a carotenoid–porphyrin–diquinone tetrad: enhancement of quantum yields via control of electronic coupling 176 (1993) 321
Lei, Y., see J.F. Endicott 176 (1993) 427
Leroi, G.E., see J.M. Zaleski 176 (1993) 483
Levinger, N.E., see A.E. Johnson 176 (1993) 555
Linskens, A.F., see S. te Lintel Hekkert 176 (1993) 171
Lisini, A., see A. Baldovin 176 (1993) 67
Lykke, K.R., see P. Wurz 176 (1993) 185

Macpherson, A.N., see S.-J. Lee 176 (1993) 321
Matsuda, Y., see S. Fukuzumi 176 (1993) 337
McDowell, L.M., see L. Laporte 176 (1993) 615
McLendon, G.L., see J.R. Cowdery-Corvan 176 (1993) 377

Melandri, S., see L.B. Favero 176 (1993) 165
Meyer, W., see J. Stärck 176 (1993) 83
Miller, J.A., see L.A. Curtiss 176 (1993) 387
Moore, A.L., see S.-J. Lee 176 (1993) 321
Moore, T.A., see S.-J. Lee 176 (1993) 321
Moreira, I., see M.Y. Ogawa 176 (1993) 589
Moser, J.E. and M. Grätzel, Observation of temperature independent heterogeneous electron transfer reactions in the inverted Marcus region 176 (1993) 493
Murrell, J.N., see J.C. Belchior 176 (1993) 155

Naleway, C.A., see L.A. Curtiss 176 (1993) 387
Nocera, D.G., see J.M. Zaleski 176 (1993) 483
Norris, J.R., see Z. Wang 176 (1993) 421
Noukakis, D., see I.R. Gould 176 (1993) 439

Ogawa, M.Y., I. Moreira, J.F. Wishart and S.S. Isied, Long range electron transfer in helical polyproline II oligopeptides 176 (1993) 589
O'Keeffe, M., see G.B. Adams 176 (1993) 61
Onuchic, J.N., see S.S. Skourtis 176 (1993) 501
Osad'ko, I.S., see D.V. Donskoi 176 (1993) 135

Paddon-Row, M.N., see M.J. Shephard 176 (1993) 289
Page, J.B., see G.B. Adams 176 (1993) 61
Pearlstein, R.M., see Z. Wang 176 (1993) 421
Phelps, D.K., M.J. Weaver and B.M. Ladanyi, Solvent dynamical effects in electron transfer: molecular dynamics simulations of reactions in methanol 176 (1993) 575
Philipp, S., see M.C. Böhm 176 (1993) 109
Pierre, G., see S. te Lintel Hekkert 176 (1993) 171
Port, H., see N. Holl 176 (1993) 215

Reimers, J.R. and N.S. Hush, Hole, electron and energy transfer through bridged systems. VIII. Soliton molecular switching in symmetry-broken Brooker (polymethinecyanine) cations 176 (1993) 407
Rettschnick, R.P.H., see B. Wegewijs 176 (1993) 349
Reuss, J., see S. te Lintel Hekkert 176 (1993) 171
Richardson, D.E. and J.R. Eyler, Statistical rate theory of gas-phase electron transfer. The ferrocene/ferrocenium self-exchange reaction 176 (1993) 457

Sankey, O.F., see G.B. Adams 176 (1993) 61
Sartakov, B.G., see S. te Lintel Hekkert 176 (1993) 171
Schanze, K.S., see Y. Wang 176 (1993) 305
Schenck, C.C., see L. Laporte 176 (1993) 615
Scherer, T., see B. Wegewijs 176 (1993) 349
Schlief, R.E., see A.E. Johnson 176 (1993) 555
Schulte, J., see M.C. Böhm 176 (1993) 109
Seely, G.R., see S.-J. Lee 176 (1993) 321
Shephard, M.J., M.N. Paddon-Row and K.D. Jordan, Electronic coupling through saturated hydrocarbon bridges 176 (1993) 289

Shin, E.-J., see S.-J. Lee 176 (1993) 321
Singh, J., see M. Georgiev 176 (1993) 47
Skourtis, S.S., D.N. Beratan and J.N. Onuchic, The two-state reduction for electron and hole transfer in bridge-mediated electron-transfer reactions 176 (1993) 501
Smith, B.B., A. Staib and J.T. Hynes, Well and barrier dynamics and electron transfer rates. A molecular dynamics study 176 (1993) 521
Song, X., see J.F. Endicott 176 (1993) 427
Staib, A., see B.B. Smith 176 (1993) 521
Stärck, J. and W. Meyer, Ab initio potential energy surface for the collisional system $H^- + H_2$ and properties of its van der Waals complex 176 (1993) 83
Strobel, H., see N. Holl 176 (1993) 215

Te Lintel Hekkert, S., A.F. Linskens, I. Holleman, B.G. Sartakov, G. Pierre and J. Reuss, Multiphoton multi laser spectroscopy of the ν_3 mode of SF_6 in a molecular beam 176 (1993) 171
Terrell, D., see G. Verbeek 176 (1993) 195
Tomkinson, J., see F. Fillaux 176 (1993) 249
Tomkinson, J., see G.J. Kearley 176 (1993) 279

Ulstrup, J., see A.M. Kuznetsov 176 (1993) 539

Vaes, A., see G. Verbeek 176 (1993) 195
Van der Auweraer, M., see G. Verbeek 176 (1993) 195
Verbeek, G., S. Depaemelaere, M. Van der Auweraer, F.C. De Schryver, A. Vaes, D. Terrell and S. De Meutter, Amino derivatives of symmetric 1,3,5-triphenylbenzene. Nature of the polar singlet excited state. 176 (1993) 195
Verhoeven, J.W., see B. Wegewijs 176 (1993) 349
Vigdorovich, M.D., see A.M. Kuznetsov 176 (1993) 539

Wang, Y. and K.S. Schanze, Photochemical probes of intramolecular electron and energy transfer 176 (1993) 305
Wang, Z., R.M. Pearlstein, Y. Jia, G.R. Fleming and J.R. Norris, Inhomogeneous electron transfer kinetics in reaction centers of bacterial photosynthesis 176 (1993) 421
Wasielewski, M.R., see G.P. Wiederrecht 176 (1993) 601
Watanabe, S., see G.P. Wiederrecht 176 (1993) 601
Watzky, M.A., see J.F. Endicott 176 (1993) 427
Weaver, M.J., see D.K. Phelps 176 (1993) 575
Wegener, W., see G.J. Kearley 176 (1993) 279
Wegewijs, B., T. Scherer, R.P.H. Rettschnick and J.W. Verhoeven, Exciplex formation in jet-cooled donor–bridge–acceptor compounds incorporating bridges with three degrees of flexibility 176 (1993) 349
Whitten, D.G., see J.R. Cowdery-Corvan 176 (1993) 377
Wiederrecht, G.P., S. Watanabe and M.R. Wasielewski, Solvent effects on the energetics and dynamics of ultrafast electron transfer in chlorophyll–porphyrin–acceptor triads 176 (1993) 601
Wishart, J.F., see M.Y. Ogawa 176 (1993) 589
Wolf, H.C., see N. Holl 176 (1993) 215
Wu, W., see J.M. Zaleski 176 (1993) 483
Wurz, P. and K.R. Lykke, Photodetachment from laser-desorbed C_2^- 176 (1993) 185

Young, R.H., see I.R. Gould 176 (1993) 439

Zaitsev, N.N., see D.V. Donskoi 176 (1993) 135
Zaleski, J.M., W. Wu, C.K. Chang, G.E. Leroi, R.I. Cukier and D.G. Nocera, Dynamical solvent effects in inverted region electron transfer 176 (1993) 483

Subject Index to Volume 176

Methods

Theoretical

Many body and quasiparticle approaches
Exchange mediated pairing as a source of superconductivity in alkali-doped C_{60}, L. Jansen, L. Chandran and R. Block 176 (1993) 1
Solvent relaxation dynamics and electron transfer, M. Bixon and J. Jortner 176 (1993) 467
The two-state reduction for electron and hole transfer in bridge-mediated electron-transfer reactions, S.S. Skourtis, D.N. Beratan and J.N. Onuchic 176 (1993) 501
Self-consistent environmental fluctuation effects on the electronic tunnel factor and the activation Gibbs energy in long-range electron transfer, A.M. Kuznetsov, M.D. Vigdorovich and J. Ulstrup 176 (1993) 539

Coupling schemes and perturbative treatments
Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. I. Exchange states, *g*-factors, hyperfine interactions, M. Belinskii 176 (1993) 15
Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. II. Double exchange in distorted cluster, M. Belinskii 176 (1993) 37
Electronic coupling through saturated hydrocarbon bridges, M.J. Shephard, M.N. Paddon-Row and K.D. Jordan 176 (1993) 289
Radiative and nonradiative electron transfer in contact radical–ion pairs, I.R. Gould, D. Noukakis, L. Gomez-Jahn, R.H. Young, J.L. Goodman and S. Farid 176 (1993) 439

Transport quantum mechanics
Symmetry states of vibronic Frenkel excitons, M. Georgiev and J. Singh 176 (1993) 47
Hole, electron and energy transfer through bridged systems. VIII. Soliton molecular switching in symmetry-broken Brooker (polymethinecyanine) cations, J.R. Reimers and N.S. Hush 176 (1993) 407

Equilibrium statistical mechanics
Statistical rate theory of gas-phase electron transfer. The ferrocene/ferrocenium self-exchange reaction, D.E. Richardson and J.R. Eyler 176 (1993) 457

Ab initio schemes for stationary properties
Jahn–Teller distortions in solid C_{20} and other fullerene structures, G.B. Adams, O.F. Sankey, J.B. Page and M. O'Keeffe 176 (1993) 61
Ab initio calculations of the core ionization spectra of unsaturated hydrocarbons, A. Baldovin, G. De Alti, P. Decleva, G. Fronzoni and A. Lisini 176 (1993) 67

Ab initio potential energy surface for the collisional system $H^- + H_2$ and properties of its van der Waals complex, J. Stärck and W. Meyer 176 (1993) 83
Transfer of mobile electrons in organic molecules, S. Larsson and M. Braga 176 (1993) 367
Superexchange pathway calculation of long-distance electron coupling in $H_2C(CH_2)_{m-2}CH_2$ chains, L.A. Curtiss, C.A. Naleway and J.A. Miller 176 (1993) 387

Computational and simulation methods
Simulation of water solutions of Ni^{2+} at infinite dilution, M.N.D.S. Cordeiro, A. Ignaczak and J.A.N.F. Gomes 176 (1993) 97
Analysis of static and dynamic electron and spin properties within the interaction space of the one-dimensional Hubbard chain; a path-integral quantum Monte Carlo approach, M.C. Böhm, J. Schulte and S. Philipp 176 (1993) 109
Superexchange pathway calculation of long-distance electron coupling in $H_2C(CH_2)_{m-2}CH_2$ chains, L.A. Curtiss, C.A. Naleway and J.A. Miller 176 (1993) 387
Inhomogeneous electron transfer kinetics in reaction centers of bacterial photosynthesis, Z. Wang, R.M. Pearlstein, Y. Jia, G.R. Fleming and J.R. Norris 176 (1993) 421
Well and barrier dynamics and electron transfer rates. A molecular dynamics study, B.B. Smith, A. Staib and J.T. Hynes 176 (1993) 521
Solvent dynamical effects in electron transfer: molecular dynamics simulations of reactions in methanol, D.K. Phelps, M.J. Weaver and B.M. Ladanyi 176 (1993) 575

Molecular dynamics and scattering theory
Symmetry states of vibronic Frenkel excitons, M. Georgiev and J. Singh 176 (1993) 47
Effect of tunneling systems on impurity homogeneous optical bands in amorphous solids, D.V. Donskoi, N.N. Zaitsev and I.S. Osad'ko 176 (1993) 135
A hard shape potential model for atom–symmetric top inelastic cross sections, J.C. Belchior, J.N. Murrell and S.D. Bosanac 176 (1993) 155

Experimental

Microwave spectroscopy
Microwave spectrum of $^{35}ClCN$ in excited vibrational states, L.B. Favero, S. Melandri and P.G. Favero 176 (1993) 165

Infrared spectroscopy
Multiphoton multi laser spectroscopy of the ν_3 mode of SF_6 in a molecular beam, S. te Lintel Hekkert, A.F. Linskens, I. Holleman, B.G. Sartakov, G. Pierre and J. Reuss 176 (1993) 171

Visible and UV spectroscopy
Photodetachment from laser-desorbed C_2^-, P. Wurz and K.R. Lykke 176 (1993) 185
Amino derivatives of symmetric 1,3,5-triphenylbenzene. Nature of the polar singlet excited state., G. Verbeek, S. Depaemelaere, M. Van der Auweraer, F.C. De Schryver, A. Vaes, D. Terrell and S. De Meutter 176 (1993) 195
The mechanism of intramolecular energy transfer in terminally substituted polyene molecules, N. Holl, H. Port, H.C. Wolf, H. Strobel and F. Effenberger 176 (1993) 215
UV–visible linear dichroism of naphthalene bicarboxylic acid derivatives dissolved in nematic liquid crystal, D. Bauman and H.-G. Kuball 176 (1993) 221

Electron transfer chemistry of hydride and carbanion donors. Hydride and carbanion transfer via electron transfer, S. Fukuzumi, T. Kitano, M. Ishikawa and Y. Matsuda 176 (1993) 337
Quenching of the excited state of hydrated europium(III) ions by electron transfer, K.M. Christensen, A. Bakac and J.H. Espenson 176 (1993) 359
Electrochemical and spectroscopic manifestations of donor–acceptor coupling in cyanide bridged transition metal complexes: Contrasts between Ru–CN–Ru, Co–Ru and Rh–CN–Ru systems, J.F. Endicott, X. Song, M.A. Watzky, T. Buranda and Y. Lei 176 (1993) 427
Observation of temperature independent heterogeneous electron transfer reactions in the inverted Marcus region, J.E. Moser and M. Grätzel 176 (1993) 493

Fluorescence spectroscopy
Radiative and nonradiative electron transfer in contact radical–ion pairs, I.R. Gould, D. Noukakis, L. Gomez-Jahn, R.H. Young, J.L. Goodman and S. Farid 176 (1993) 439

Photoelectron and Auger spectroscopy
Exchange mediated pairing as a source of superconductivity in alkali-doped C_{60}, L. Jansen, L. Chandran and R. Block 176 (1993) 1

Laser methods
Multiphoton multi laser spectroscopy of the ν_3 mode of SF_6 in a molecular beam, S. te Lintel Hekkert, A.F. Linskens, I. Holleman, B.G. Sartakov, G. Pierre and J. Reuss 176 (1993) 171
Photodetachment from laser-desorbed C_2^-, P. Wurz and K.R. Lykke 176 (1993) 185
Photoinduced charge separation in a carotenoid–porphyrin–diquinone tetrad: enhancement of quantum yields via control of electronic coupling, S.-J. Lee, J.M. DeGraziano, A.N. Macpherson, E.-J. Shin, P.K. Kerrigan, G.R. Seely, A.L. Moore, T.A. Moore and D. Gust 176 (1993) 321
Quenching of the excited state of hydrated europium(III) ions by electron transfer, K.M. Christensen, A. Bakac and J.H. Espenson 176 (1993) 359

Picosecond spectroscopy
Amino derivatives of symmetric 1,3,5-triphenylbenzene. Nature of the polar singlet excited state., G. Verbeek, S. Depaemelaere, M. Van der Auweraer, F.C. De Schryver, A. Vaes, D. Terrell and S. De Meutter 176 (1993) 195
Radiative and nonradiative electron transfer in contact radical–ion pairs, I.R. Gould, D. Noukakis, L. Gomez-Jahn, R.H. Young, J.L. Goodman and S. Farid 176 (1993) 439
Dynamical solvent effects in inverted region electron transfer, J.M. Zaleski, W. Wu, C.K. Chang, G.E. Leroi, R.I. Cukier and D.G. Nocera 176 (1993) 483
Experimental and theoretical study of inhomogeneous electron transfer in betaine: comparisons of measured and predicted spectral dynamics, A.E. Johnson, N.E. Levinger, W. Jarzęba, R.E. Schlief, D.A.V. Kliner and P.F. Barbara 176 (1993) 555
Long range electron transfer in helical polyproline II oligopeptides, M.Y. Ogawa, I. Moreira, J.F. Wishart and S.S. Isied 176 (1993) 589
Solvent effects on the energetics and dynamics of ultrafast electron transfer in chlorophyll–porphyrin–acceptor triads, G.P. Wiederrecht, S. Watanabe and M.R. Wasielewski 176 (1993) 601
Insights into the factors controlling the rates of the deactivation processes that compete with charge separation in photosynthetic reaction centers, L. Laporte, L.M. McDowell, C. Kirmaier, C.C. Schenck and D. Holten 176 (1993) 615

Atomic and molecular beam techniques
Exciplex formation in jet-cooled donor–bridge–acceptor compounds incorporating bridges with three degrees of flexibility, B. Wegewijs, T. Scherer, R.P.H. Rettschnick and J.W. Verhoeven 176 (1993) 349

Time-resolved experiments
Electronic dephasing studies of molecules in solution at room temperature by femtosecond degenerate four wave mixing, T. Joo and A.C. Albrecht 176 (1993) 233
Photochemical probes of intramolecular electron and energy transfer, Y. Wang and K.S. Schanze 176 (1993) 305
Photoinduced charge separation in a carotenoid–porphyrin–diquinone tetrad: enhancement of quantum yields via control of electronic coupling, S.-J. Lee, J.M. DeGraziano, A.N. Macpherson, E.-J. Shin, P.K. Kerrigan, G.R. Seely, A.L. Moore, T.A. Moore and D. Gust 176 (1993) 321
Electron transfer chemistry of hydride and carbanion donors. Hydride and carbanion transfer via electron transfer, S. Fukuzumi, T. Kitano, M. Ishikawa and Y. Matsuda 176 (1993) 337
Quenching of the excited state of hydrated europium(III) ions by electron transfer, K.M. Christensen, A. Bakac and J.H. Espenson 176 (1993) 359
Electron transfer reactions at CdS semiconductor cluster interfaces. Adsorption and microenvironment effects on oxidative reactions, J.R. Cowdery-Corvan, D.G. Whitten and G.L. McLendon 176 (1993) 377
Observation of temperature independent heterogeneous electron transfer reactions in the inverted Marcus region, J.E. Moser and M. Grätzel 176 (1993) 493
Experimental and theoretical study of inhomogeneous electron transfer in betaine: comparisons of measured and predicted spectral dynamics, A.E. Johnson, N.E. Levinger, W. Jarzęba, R.E. Schlief, D.A.V. Kliner and P.F. Barbara 176 (1993) 555
Long range electron transfer in helical polyproline II oligopeptides, M.Y. Ogawa, I. Moreira, J.F. Wishart and S.S. Isied 176 (1993) 589

Mass spectrometry
Photodetachment from laser-desorbed C_2^-, P. Wurz and K.R. Lykke 176 (1993) 185

Neutron scattering
Inelastic neutron-scattering study of the proton dynamics in N-methylacetamide at 20 K, F. Fillaux, J.P. Fontaine, M.-H. Baron, G.J. Kearley and J. Tomkinson 176 (1993) 249
The effects of NH_3 free rotation on the inelastic neutron scattering spectrum of $Ni(NH_3)_2Ni(CN)_4 \cdot 2C_6D_6$ at 20 K, G.J. Kearley, G. Coddens, F. Fillaux, J. Tomkinson and W. Wegener 176 (1993) 279

Objects

Bulk systems

Supersonic beams
Multiphoton multi laser spectroscopy of the ν_3 mode of SF_6 in a molecular beam, S. te Lintel Hekkert, A.F. Linskens, I. Holleman, B.G. Sartakov, G. Pierre and J. Reuss 176 (1993) 171

Exciplex formation in jet-cooled donor–bridge–acceptor compounds incorporating bridges with three degrees of flexibility, B. Wegewijs, T. Scherer, R.P.H. Rettschnick and J.W. Verhoeven 176 (1993) 349

Liquids mixtures and solutions

Simulation of water solutions of Ni^{2+} at infinite dilution, M.N.D.S. Cordeiro, A. Ignaczak and J.A.N.F. Gomes 176 (1993) 97

The mechanism of intramolecular energy transfer in terminally substituted polyene molecules, N. Holl, H. Port, H.C. Wolf, H. Strobel and F. Effenberger 176 (1993) 215

Electronic dephasing studies of molecules in solution at room temperature by femtosecond degenerate four wave mixing, T. Joo and A.C. Albrecht 176 (1993) 233

Electron transfer chemistry of hydride and carbanion donors. Hydride and carbanion transfer via electron transfer, S. Fukuzumi, T. Kitano, M. Ishikawa and Y. Matsuda 176 (1993) 337

Well and barrier dynamics and electron transfer rates. A molecular dynamics study, B.B. Smith, A. Staib and J.T. Hynes 176 (1993) 521

Crystals

Exchange mediated pairing as a source of superconductivity in alkali-doped C_{60}, L. Jansen, L. Chandran and R. Block 176 (1993) 1

Symmetry states of vibronic Frenkel excitons, M. Georgiev and J. Singh 176 (1993) 47

Jahn–Teller distortions in solid C_{20} and other fullerene structures, G.B. Adams, O.F. Sankey, J.B. Page and M. O'Keeffe 176 (1993) 61

Inelastic neutron-scattering study of the proton dynamics in N-methylacetamide at 20 K, F. Fillaux, J.P. Fontaine, M.-H. Baron, G.J. Kearley and J. Tomkinson 176 (1993) 249

Glasses

Effect of tunneling systems on impurity homogeneous optical bands in amorphous solids, D.V. Donskoi, N.N. Zaitsev and I.S. Osad'ko 176 (1993) 135

Liquid crystals

UV–visible linear dichroism of naphthalene bicarboxylic acid derivatives dissolved in nematic liquid crystal, D. Bauman and H.-G. Kuball 176 (1993) 221

Polymers

Analysis of static and dynamic electron and spin properties within the interaction space of the one-dimensional Hubbard chain; a path-integral quantum Monte Carlo approach, M.C. Böhm, J. Schulte and S. Philipp 176 (1993) 109

Effect of tunneling systems on impurity homogeneous optical bands in amorphous solids, D.V. Donskoi, N.N. Zaitsev and I.S. Osad'ko 176 (1993) 135

Semiconductors

Symmetry states of vibronic Frenkel excitons, M. Georgiev and J. Singh 176 (1993) 47

Electron transfer reactions at CdS semiconductor cluster interfaces. Adsorption and microenvironment effects on oxidative reactions, J.R. Cowdery-Corvan, D.G. Whitten and G.L. McLendon 176 (1993) 377

Surfaces
Observation of temperature independent heterogeneous electron transfer reactions in the inverted Marcus region, J.E. Moser and M. Grätzel 176 (1993) 493

Low-dimensional materials
Analysis of static and dynamic electron and spin properties within the interaction space of the one-dimensional Hubbard chain; a path-integral quantum Monte Carlo approach, M.C. Böhm, J. Schulte and S. Philipp 176 (1993) 109

Dielectrics
Self-consistent environmental fluctuation effects on the electronic tunnel factor and the activation Gibbs energy in long-range electron transfer, A.M. Kuznetsov, M.D. Vigdorovich and J. Ulstrup 176 (1993) 539

Biological systems
Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. I. Exchange states, *g*-factors, hyperfine interactions, M. Belinskii 176 (1993) 15
Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. II. Double exchange in distorted cluster, M. Belinskii 176 (1993) 37
Inhomogeneous electron transfer kinetics in reaction centers of bacterial photosynthesis, Z. Wang, R.M. Pearlstein, Y. Jia, G.R. Fleming and J.R. Norris 176 (1993) 421
The two-state reduction for electron and hole transfer in bridge-mediated electron-transfer reactions, S.S. Skourtis, D.N. Beratan and J.N. Onuchic 176 (1993) 501
Insights into the factors controlling the rates of the deactivation processes that compete with charge separation in photosynthetic reaction centers, L. Laporte, L.M. McDowell, C. Kirmaier, C.C. Schenck and D. Holten 176 (1993) 615

Microscopic systems

Molecules (neutral and ionic)
Jahn–Teller distortions in solid C_{20} and other fullerene structures, G.B. Adams, O.F. Sankey, J.B. Page and M. O'Keeffe 176 (1993) 61
Ab initio calculations of the core ionization spectra of unsaturated hydrocarbons, A. Baldovin, G. De Alti, P. Decleva, G. Fronzoni and A. Lisini 176 (1993) 67
Superexchange pathway calculation of long-distance electron coupling in $H_2C(CH_2)_{m-2}CH_2$ chains, L.A. Curtiss, C.A. Naleway and J.A. Miller 176 (1993) 387
Self-consistent environmental fluctuation effects on the electronic tunnel factor and the activation Gibbs energy in long-range electron transfer, A.M. Kuznetsov, M.D. Vigdorovich and J. Ulstrup 176 (1993) 539

–diatomic
Photodetachment from laser-desorbed C_2^-, P. Wurz and K.R. Lykke 176 (1993) 185

–small polyatomics
Ab initio calculations of the core ionization spectra of unsaturated hydrocarbons, A. Baldovin, G. De Alti, P. Decleva, G. Fronzoni and A. Lisini 176 (1993) 67
A hard shape potential model for atom–symmetric top inelastic cross sections, J.C. Belchior, J.N. Murrell and S.D. Bosanac 176 (1993) 155

Microwave spectrum of $^{35}ClCN$ in excited vibrational states, L.B. Favero, S. Melandri and P.G. Favero 176 (1993) 165
The effects of NH_3 free rotation on the inelastic neutron scattering spectrum of $Ni(NH_3)_2Ni(CN)_4 \cdot 2C_6D_6$ at 20 K, G.J. Kearley, G. Coddens, F. Fillaux, J. Tomkinson and W. Wegener 176 (1993) 279
Electronic coupling through saturated hydrocarbon bridges, M.J. Shephard, M.N. Paddon-Row and K.D. Jordan 176 (1993) 289

–aromatics
Amino derivatives of symmetric 1,3,5-triphenylbenzene. Nature of the polar singlet excited state., G. Verbeek, S. Depaemelaere, M. Van der Auweraer, F.C. De Schryver, A. Vaes, D. Terrell and S. De Meutter 176 (1993) 195
UV–visible linear dichroism of naphthalene bicarboxylic acid derivatives dissolved in nematic liquid crystal, D. Bauman and H.-G. Kuball 176 (1993) 221
Transfer of mobile electrons in organic molecules, S. Larsson and M. Braga 176 (1993) 367
Solvent effects on the energetics and dynamics of ultrafast electron transfer in chlorophyll–porphyrin–acceptor triads, G.P. Wiederrecht, S. Watanabe and M.R. Wasielewski 176 (1993) 601

–other large
The mechanism of intramolecular energy transfer in terminally substituted polyene molecules, N. Holl, H. Port, H.C. Wolf, H. Strobel and F. Effenberger 176 (1993) 215
Inelastic neutron-scattering study of the proton dynamics in N-methylacetamide at 20 K, F. Fillaux, J.P. Fontaine, M.-H. Baron, G.J. Kearley and J. Tomkinson 176 (1993) 249
Photoinduced charge separation in a carotenoid–porphyrin–diquinone tetrad: enhancement of quantum yields via control of electronic coupling, S.-J. Lee, J.M. DeGraziano, A.N. Macpherson, E.-J. Shin, P.K. Kerrigan, G.R. Seely, A.L. Moore, T.A. Moore and D. Gust 176 (1993) 321
Hole, electron and energy transfer through bridged systems. VIII. Soliton molecular switching in symmetry-broken Brooker (polymethinecyanine) cations, J.R. Reimers and N.S. Hush 176 (1993) 407
Statistical rate theory of gas-phase electron transfer. The ferrocene/ferrocenium self-exchange reaction, D.E. Richardson and J.R. Eyler 176 (1993) 457
Dynamical solvent effects in inverted region electron transfer, J.M. Zaleski, W. Wu, C.K. Chang, G.E. Leroi, R.I. Cukier and D.G. Nocera 176 (1993) 483
Observation of temperature independent heterogeneous electron transfer reactions in the inverted Marcus region, J.E. Moser and M. Grätzel 176 (1993) 493
Experimental and theoretical study of inhomogeneous electron transfer in betaine: comparisons of measured and predicted spectral dynamics, A.E. Johnson, N.E. Levinger, W. Jarzęba, R.E. Schlief, D.A.V. Kliner and P.F. Barbara 176 (1993) 555

–polymeric and biological
The two-state reduction for electron and hole transfer in bridge-mediated electron-transfer reactions, S.S. Skourtis, D.N. Beratan and J.N. Onuchic 176 (1993) 501

Molecular aggregates

–van der Waals molecules
Ab initio potential energy surface for the collisional system $H^- + H_2$ and properties of its van der Waals complex, J. Stärck and W. Meyer 176 (1993) 83

–clusters
Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. I. Exchange states, *g*-factors, hyperfine interactions, M. Belinskii 176 (1993) 15
Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. II. Double exchange in distorted cluster, M. Belinskii 176 (1993) 37
Electron transfer reactions at CdS semiconductor cluster interfaces. Adsorption and microenvironment effects on oxidative reactions, J.R. Cowdery-Corvan, D.G. Whitten and G.L. McLendon 176 (1993) 377

–complexes
Quenching of the excited state of hydrated europium(III) ions by electron transfer, K.M. Christensen, A. Bakac and J.H. Espenson 176 (1993) 359
Electrochemical and spectroscopic manifestations of donor–acceptor coupling in cyanide bridged transition metal complexes: Contrasts between Ru–CN–Ru, Co–Ru and Rh–CN–Ru systems, J.F. Endicott, X. Song, M.A. Watzky, T. Buranda and Y. Lei 176 (1993) 427

Free radicals (including hydronium and muonium)
Electron transfer chemistry of hydride and carbanion donors. Hydride and carbanion transfer via electron transfer, S. Fukuzumi, T. Kitano, M. Ishikawa and Y. Matsuda 176 (1993) 337

Ions and charge carriers
Exchange mediated pairing as a source of superconductivity in alkali-doped C_{60}, L. Jansen, L. Chandran and R. Block 176 (1993) 1

Phenomena

Molecular structure
Simulation of water solutions of Ni^{2+} at infinite dilution, M.N.D.S. Cordeiro, A. Ignaczak and J.A.N.F. Gomes 176 (1993) 97
Microwave spectrum of $^{35}ClCN$ in excited vibrational states, L.B. Favero, S. Melandri and P.G. Favero 176 (1993) 165

Vibrations and rotations of molecules
The effects of NH_3 free rotation on the inelastic neutron scattering spectrum of $Ni(NH_3)_2Ni(CN)_4 \cdot 2C_6D_6$ at 20 K, G.J. Kearley, G. Coddens, F. Fillaux, J. Tomkinson and W. Wegener 176 (1993) 279

Electronic structure and states
Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. I. Exchange states, *g*-factors, hyperfine interactions, M. Belinskii 176 (1993) 15
Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. II. Double exchange in distorted cluster, M. Belinskii 176 (1993) 37
Jahn–Teller distortions in solid C_{20} and other fullerene structures, G.B. Adams, O.F. Sankey, J.B. Page and M. O'Keeffe 176 (1993) 61
Ab initio calculations of the core ionization spectra of unsaturated hydrocarbons, A. Baldovin, G. De Alti, P. Decleva, G. Fronzoni and A. Lisini 176 (1993) 67

Analysis of static and dynamic electron and spin properties within the interaction space of the one-dimensional Hubbard chain; a path-integral quantum Monte Carlo approach, M.C. Böhm, J. Schulte and S. Philipp 176 (1993) 109
Amino derivatives of symmetric 1,3,5-triphenylbenzene. Nature of the polar singlet excited state., G. Verbeek, S. Depaemelaere, M. Van der Auweraer, F.C. De Schryver, A. Vaes, D. Terrell and S. De Meutter 176 (1993) 195
UV–visible linear dichroism of naphthalene bicarboxylic acid derivatives dissolved in nematic liquid crystal, D. Bauman and H.-G. Kuball 176 (1993) 221
Electronic coupling through saturated hydrocarbon bridges, M.J. Shephard, M.N. Paddon-Row and K.D. Jordan 176 (1993) 289
Transfer of mobile electrons in organic molecules, S. Larsson and M. Braga 176 (1993) 367

Electric and magnetic properties
Exchange mediated pairing as a source of superconductivity in alkali-doped C_{60}, L. Jansen, L. Chandran and R. Block 176 (1993) 1
Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. I. Exchange states, *g*-factors, hyperfine interactions, M. Belinskii 176 (1993) 15

Optical activity
Transfer of mobile electrons in organic molecules, S. Larsson and M. Braga 176 (1993) 367

Molecular interactions
Simulation of water solutions of Ni^{2+} at infinite dilution, M.N.D.S. Cordeiro, A. Ignaczak and J.A.N.F. Gomes 176 (1993) 97
Inelastic neutron-scattering study of the proton dynamics in N-methylacetamide at 20 K, F. Fillaux, J.P. Fontaine, M.-H. Baron, G.J. Kearley and J. Tomkinson 176 (1993) 249

Spectral bandshapes and intensities
Effect of tunneling systems on impurity homogeneous optical bands in amorphous solids, D.V. Donskoi, N.N. Zaitsev and I.S. Osad'ko 176 (1993) 135
Inelastic neutron-scattering study of the proton dynamics in N-methylacetamide at 20 K, F. Fillaux, J.P. Fontaine, M.-H. Baron, G.J. Kearley and J. Tomkinson 176 (1993) 249

Coupling of electronic and nuclear motion
Jahn–Teller distortions in solid C_{20} and other fullerene structures, G.B. Adams, O.F. Sankey, J.B. Page and M. O'Keeffe 176 (1993) 61
Self-consistent environmental fluctuation effects on the electronic tunnel factor and the activation Gibbs energy in long-range electron transfer, A.M. Kuznetsov, M.D. Vigdorovich and J. Ulstrup 176 (1993) 539

Energy transfer processes
Symmetry states of vibronic Frenkel excitons, M. Georgiev and J. Singh 176 (1993) 47
A hard shape potential model for atom–symmetric top inelastic cross sections, J.C. Belchior, J.N. Murrell and S.D. Bosanac 176 (1993) 155
Microwave spectrum of $^{35}ClCN$ in excited vibrational states, L.B. Favero, S. Melandri and P.G. Favero 176 (1993) 165
The mechanism of intramolecular energy transfer in terminally substituted polyene molecules, N. Holl, H. Port, H.C. Wolf, H. Strobel and F. Effenberger 176 (1993) 215

Photochemical probes of intramolecular electron and energy transfer, Y. Wang and K.S. Schanze 176 (1993) 305
Superexchange pathway calculation of long-distance electron coupling in $H_2C(CH_2)_{m-2}CH_2$ chains, L.A. Curtiss, C.A. Naleway and J.A. Miller 176 (1993) 387

Molecular photophysical processes
Photodetachment from laser-desorbed C_2^-, P. Wurz and K.R. Lykke 176 (1993) 185
Amino derivatives of symmetric 1,3,5-triphenylbenzene. Nature of the polar singlet excited state., G. Verbeek, S. Depaemelaere, M. Van der Auweraer, F.C. De Schryver, A. Vaes, D. Terrell and S. De Meutter 176 (1993) 195
Photoinduced charge separation in a carotenoid–porphyrin–diquinone tetrad: enhancement of quantum yields via control of electronic coupling, S.-J. Lee, J.M. DeGraziano, A.N. Macpherson, E.-J. Shin, P.K. Kerrigan, G.R. Seely, A.L. Moore, T.A. Moore and D. Gust 176 (1993) 321
Solvent effects on the energetics and dynamics of ultrafast electron transfer in chlorophyll–porphyrin–acceptor triads, G.P. Wiederrecht, S. Watanabe and M.R. Wasielewski 176 (1993) 601
Insights into the factors controlling the rates of the deactivation processes that compete with charge separation in photosynthetic reaction centers, L. Laporte, L.M. McDowell, C. Kirmaier, C.C. Schenck and D. Holten 176 (1993) 615

Intramolecular dynamics
Hole, electron and energy transfer through bridged systems. VIII. Soliton molecular switching in symmetry-broken Brooker (polymethinecyanine) cations, J.R. Reimers and N.S. Hush 176 (1993) 407
Solvent effects on the energetics and dynamics of ultrafast electron transfer in chlorophyll–porphyrin–acceptor triads, G.P. Wiederrecht, S. Watanabe and M.R. Wasielewski 176 (1993) 601

–vibrational energy redistribution (including vibrational dissociation)
Exciplex formation in jet-cooled donor–bridge–acceptor compounds incorporating bridges with three degrees of flexibility, B. Wegewijs, T. Scherer, R.P.H. Rettschnick and J.W. Verhoeven 176 (1993) 349

Luminescence spectra, yields and lifetimes
Exciplex formation in jet-cooled donor–bridge–acceptor compounds incorporating bridges with three degrees of flexibility, B. Wegewijs, T. Scherer, R.P.H. Rettschnick and J.W. Verhoeven 176 (1993) 349
Radiative and nonradiative electron transfer in contact radical–ion pairs, I.R. Gould, D. Noukakis, L. Gomez-Jahn, R.H. Young, J.L. Goodman and S. Farid 176 (1993) 439

Non-linear responses (including optical)
Hole, electron and energy transfer through bridged systems. VIII. Soliton molecular switching in symmetry-broken Brooker (polymethinecyanine) cations, J.R. Reimers and N.S. Hush 176 (1993) 407

Multiphoton phenomena
Multiphoton multi laser spectroscopy of the ν_3 mode of SF_6 in a molecular beam, S. te Lintel Hekkert, A.F. Linskens, I. Holleman, B.G. Sartakov, G. Pierre and J. Reuss 176 (1993) 171

Reactions (including dissociation)
The two-state reduction for electron and hole transfer in bridge-mediated electron-transfer reactions, S.S. Skourtis, D.N. Beratan and J.N. Onuchic 176 (1993) 501

–gas phase
Statistical rate theory of gas-phase electron transfer. The ferrocene/ferrocenium self-exchange reaction, D.E. Richardson and J.R. Eyler 176 (1993) 457

–condensed phase
Well and barrier dynamics and electron transfer rates. A molecular dynamics study, B.B. Smith, A. Staib and J.T. Hynes 176 (1993) 521

Electron transfer
Heisenberg model for tetrameric iron clusters in high-potential iron–sulfur proteins. II. Double exchange in distorted cluster, M. Belinskii 176 (1993) 37
Electronic coupling through saturated hydrocarbon bridges, M.J. Shephard, M.N. Paddon-Row and K.D. Jordan 176 (1993) 289
Photochemical probes of intramolecular electron and energy transfer, Y. Wang and K.S. Schanze 176 (1993) 305
Photoinduced charge separation in a carotenoid–porphyrin–diquinone tetrad: enhancement of quantum yields via control of electronic coupling, S.-J. Lee, J.M. DeGraziano, A.N. Macpherson, E.-J. Shin, P.K. Kerrigan, G.R. Seely, A.L. Moore, T.A. Moore and D. Gust 176 (1993) 321
Electron transfer chemistry of hydride and carbanion donors. Hydride and carbanion transfer via electron transfer, S. Fukuzumi, T. Kitano, M. Ishikawa and Y. Matsuda 176 (1993) 337
Exciplex formation in jet-cooled donor–bridge–acceptor compounds incorporating bridges with three degrees of flexibility, B. Wegewijs, T. Scherer, R.P.H. Rettschnick and J.W. Verhoeven 176 (1993) 349
Quenching of the excited state of hydrated europium(III) ions by electron transfer, K.M. Christensen, A. Bakac and J.H. Espenson 176 (1993) 359
Transfer of mobile electrons in organic molecules, S. Larsson and M. Braga 176 (1993) 367
Electron transfer reactions at CdS semiconductor cluster interfaces. Adsorption and microenvironment effects on oxidative reactions, J.R. Cowdery-Corvan, D.G. Whitten and G.L. McLendon 176 (1993) 377
Superexchange pathway calculation of long-distance electron coupling in $H_2C(CH_2)_{m-2}CH_2$ chains, L.A. Curtiss, C.A. Naleway and J.A. Miller 176 (1993) 387
Hole, electron and energy transfer through bridged systems. VIII. Soliton molecular switching in symmetry-broken Brooker (polymethinecyanine) cations, J.R. Reimers and N.S. Hush 176 (1993) 407
Inhomogeneous electron transfer kinetics in reaction centers of bacterial photosynthesis, Z. Wang, R.M. Pearlstein, Y. Jia, G.R. Fleming and J.R. Norris 176 (1993) 421
Electrochemical and spectroscopic manifestations of donor–acceptor coupling in cyanide bridged transition metal complexes: Contrasts between Ru–CN–Ru, Co–Ru and Rh–CN–Ru systems, J.F. Endicott, X. Song, M.A. Watzky, T. Buranda and Y. Lei 176 (1993) 427
Radiative and nonradiative electron transfer in contact radical–ion pairs, I.R. Gould, D. Noukakis, L. Gomez-Jahn, R.H. Young, J.L. Goodman and S. Farid 176 (1993) 439
Statistical rate theory of gas-phase electron transfer. The ferrocene/ferrocenium self-exchange reaction, D.E. Richardson and J.R. Eyler 176 (1993) 457

Solvent relaxation dynamics and electron transfer, M. Bixon and J. Jortner 176 (1993) 467
Dynamical solvent effects in inverted region electron transfer, J.M. Zaleski, W. Wu, C.K. Chang, G.E. Leroi, R.I. Cukier and D.G. Nocera 176 (1993) 483
Observation of temperature independent heterogeneous electron transfer reactions in the inverted Marcus region, J.E. Moser and M. Grätzel 176 (1993) 493
The two-state reduction for electron and hole transfer in bridge-mediated electron-transfer reactions, S.S. Skourtis, D.N. Beratan and J.N. Onuchic 176 (1993) 501
Well and barrier dynamics and electron transfer rates. A molecular dynamics study, B.B. Smith, A. Staib and J.T. Hynes 176 (1993) 521
Self-consistent environmental fluctuation effects on the electronic tunnel factor and the activation Gibbs energy in long-range electron transfer, A.M. Kuznetsov, M.D. Vigdorovich and J. Ulstrup 176 (1993) 539
Experimental and theoretical study of inhomogeneous electron transfer in betaine: comparisons of measured and predicted spectral dynamics, A.E. Johnson, N.E. Levinger, W. Jarzęba, R.E. Schlief, D.A.V. Kliner and P.F. Barbara 176 (1993) 555
Solvent dynamical effects in electron transfer: molecular dynamics simulations of reactions in methanol, D.K. Phelps, M.J. Weaver and B.M. Ladanyi 176 (1993) 575
Long range electron transfer in helical polyproline II oligopeptides, M.Y. Ogawa, I. Moreira, J.F. Wishart and S.S. Isied 176 (1993) 589
Solvent effects on the energetics and dynamics of ultrafast electron transfer in chlorophyll–porphyrin–acceptor triads, G.P. Wiederrecht, S. Watanabe and M.R. Wasielewski 176 (1993) 601
Insights into the factors controlling the rates of the deactivation processes that compete with charge separation in photosynthetic reaction centers, L. Laporte, L.M. McDowell, C. Kirmaier, C.C. Schenck and D. Holten 176 (1993) 615

Ionization (including Rydberg states)
Ab initio calculations of the core ionization spectra of unsaturated hydrocarbons, A. Baldovin, G. De Alti, P. Decleva, G. Fronzoni and A. Lisini 176 (1993) 67

Molecular motion (including diffusive)
Dynamical solvent effects in inverted region electron transfer, J.M. Zaleski, W. Wu, C.K. Chang, G.E. Leroi, R.I. Cukier and D.G. Nocera 176 (1993) 483

Fluctuations and noise
Well and barrier dynamics and electron transfer rates. A molecular dynamics study, B.B. Smith, A. Staib and J.T. Hynes 176 (1993) 521

Surface effects and catalysis
Electron transfer reactions at CdS semiconductor cluster interfaces. Adsorption and microenvironment effects on oxidative reactions, J.R. Cowdery-Corvan, D.G. Whitten and G.L. McLendon 176 (1993) 377

Phase transitions
Analysis of static and dynamic electron and spin properties within the interaction space of the one-dimensional Hubbard chain; a path-integral quantum Monte Carlo approach, M.C. Böhm, J. Schulte and S. Philipp 176 (1993) 109